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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/536,366	03/27/2000	Christopher J. Edge	53492USA1A	3630

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EXAMINER
CHUNG, DANIEL J

ART UNIT	PAPER NUMBER
2672	10

DATE MAILED: 03/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/536,366	EDGE ET AL.	
	Examiner	Art Unit	
	Daniel J Chung	2672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 January 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *25-46* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *25-46* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claims 25-46 are presented for examination. This office action is in response to the amendment filed on 1-2-2003.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 25,28-29,31-33,35-38,41 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Swen et al (5,806,081) in view of Sakuyama et al (6,137,595), and further in view of Shu et al (6,400,843).

Regarding claim 25, Swen et al discloses that the claimed feature of a system comprising:

A source device profile interpreter ["color space conversion"; 52 in "colorsync utilities"; 34] that interprets a source device profile [36] to convert coordinates in a source device color space to a device independent color space (See Fig 2, Fig 3, col 5 line 3-23, col 8 line 3-12)

A destination device profile interpreter [52] that interprets a destination device profile [38] to convert coordinates in a destination device color space to the device independent color space (See Fig 2, Fig 3, col 5 line 3-23, col 8 line 3-12)

A color transformer [34] that generates a color map [CMM] defining a relationship ["matching"] between the source and destination device color spaces based on the converted coordinates and user preferences specified by a user independently of the source and destination device profiles. (See Fig 2, Fig 3, col 6 line 37-54)

Swen et al does not specifically disclose that generating a color map based on user preferences. However, such limitation is shown in the teaching of Sakuyama et al. (See col 3 line 44-67, col 5 line 25-31, col 7 line 56-col 8 line 17, col 12 line 66-col 13 line 4) It would have been obvious to one skilled in the art to incorporate the teaching of Sakuyama into the teaching of Swen, in order to provide proper color mapping, which is preferable to a human being, as such improvement is also advantageously desirable in the teaching of Swen et al for providing user friendly system, thereby selecting a desired CMM by user's preference.

Swen et al does not explicitly disclose that a color transforming/mapping. However, Shu et al discloses a transformation that maps from the one set of colors into the other set of colors. (See col 2 line 13-23, col 2 line 46-62, col 3 line 1-22, col 6 line 4-col 7 line 13, col 7 line 60+) It would have been obvious to one skilled in the art to incorporate the teaching of Shu et al into the teaching of Swen et al, in order to provide

higher quality color reproduction with easy manner, as such improvement is also advantageously desirable in the teaching of Swen et al for obtaining the closest CMMs.

Regarding claim 28, Swen et al does not explicitly disclose that the color transformer adjusts the source and destination device profile interpreters based on the user preferences. However, as discussed in claim 25 hereinabove, Sakuyama et al teaches the similar system with user's preference can be reflected in a color image output. (See col 3 line 44-67, col 5 line 25-31, col 7 line 56-col 8 line 17, col 12 line 66-col 13 line 4) Therefore, It would have been obvious to one skilled in the art to incorporate the teaching of Sakuyama into the teaching of Swen, in order to provide proper color mapping, which is preferable to a human being, as such improvement is also advantageously desirable in the teaching of Swen et al for providing user friendly system.

Regarding claim 29, Swen et al fails to teach that the source and destination profile interpreters are configured as removable plug-in modules for use by the color transformer. However, having removable plug-in modules [i.e. external device in computer systems] in similar system is well known in the art at the time of Applicant's invention, in order to reduce physical size of system. Therefore, it would have been obvious to one skilled in the art to include "a removable plug-in modules" into the teaching of Swen et al.

Regarding claim 31, Swen et al discloses that the source and destination device profile interpreters are configured based on pleasing color corrections. (See Fig 2, Fig 3)

Regarding claim 32, Swen et al does not explicitly discloses that the color transformer generates the color map in part by reducing color error between the converted coordinates from the source and destination device profile interpreters. However, such limitation is shown in the teaching of Shu et al. (See col 2 line 13-23, col 2 line 46-62, col 3 line 1-22, col 6 line 4-col 7 line 13, col 7 line 60+) It would have been obvious to one skilled in the art to incorporate the teaching of Shu et al into the teaching of Swen et al, in order to provide higher quality color reproduction with easy manner, as such improvement is also advantageously desirable in the teaching of Swen et al for obtaining the closest CMMs.

Regarding claims 33 and 35, Swen et al does not specifically discloses that the source and destination device profile defines a forward transformation, and the source and destination device profile interpreters use forward transformation profiles to produce the converted coordinates, and the color transformer adjusts coordinates in the destination device color space to reduce the color error, the color map being based in part on the adjusted coordinates in the destination device color space. However, such "forward transformation" can be found in the teaching of Shu et al. (See col 6 line 18-col

7 line 59) It would have been obvious to one skilled in the art to incorporate the teaching of Shu et al into the teaching of Swen et al, in order to provide higher quality color reproduction with easy manner, as such improvement is also advantageously desirable in the teaching of Swen et al for obtaining the closest CMMs.

Regarding claims 36 and 37, Swen et al does not explicitly discloses that the color map includes a look-up table/a mathematical expression. However, Shu et al teaches such a LUT and a mathematical expression. (See col 7 line 60-67, col 6 line 4-col 7 line 13, col 7 line 60+) It would have been obvious to one skilled in the art to incorporate the teaching of Shu et al into the teaching of Swen et al, in order to provide higher quality color reproduction with easy manner, as such improvement is also advantageously desirable in the teaching of Swen et al for obtaining the closest CMMs.

Regarding claims 38, 41 and 44, claims 38, 41 and 44 are similar in scope to the claim 25, and thus the rejection to claim 25 hereinabove is also applicable to claims 38, 41 and 44.

Claims 26-27,30,34,39-40,42-43 and 45-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Swen et al (5,806,081) and Sakuyama et al (6,137,595) in view of Shu et al (6,400,843), further in view of Rozzi (6.232,954)

Regarding claims 26 and 27, Swen et al fails to teach that the user preferences include illuminant functions/ observer functions. However, such limitations are shown in the teaching of Rozzi. (See Fig 1, col 5 line 36-42, col 12 line 61-65) It would have been obvious to one skilled in the art to include such illuminant/observer functions into the teaching of Swen et al, in order to provide high-accuracy color reproduction, which is preferable to users, as such improvement is also advantageously desirable in the teaching of Swen et al.

Regarding claim 30, Swen et al does not explicitly discloses that the source and destination device profile interpreters are configured based on white and black point parameters to account for color variations between media and colorants used by different color display device. However, such limitation is shown in the teaching of Rozzi. (See col 12 line 66-col 13 line 5) It would have been obvious to one skilled in the art to include white and black point parameters into the teaching of Swen et al, in order to provide high-accuracy color reproduction, as such improvement is also advantageously desirable in the teaching of Swen et al for proper color conversion.

Regarding claim 34, Swen et al does not specifically discloses that the source device profile contains raw spectral data that characterizes a source device, and the destination device profile contains raw spectral data that characterizes a destination device. However, Rozzi discloses that "the spectral raw data used in generating the

model" (See col 5 line 34-36) It would have been obvious to one skilled in the art to include "the spectral raw data" into the teaching of Swen et al, in order to provide high-accuracy color reproduction with efficient manner, as such improvement is also advantageously desirable in the teaching of Swen et al for proper color conversion.

Regarding claims 39-40,42-43 and 45-46, claims 39-40,42-43 and 45-46 are similar in scope to the claims 26-27, and thus the rejections to claims 26-27 hereinabove are also applicable to claims 39-40,42-43 and 45-46.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 25,38,41 and 44 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,088,038. Although the conflicting claims are not identical, they are not patentably

distinct from each other because the present application is obvious in view of the U.S paten No. 6,088,038. The patent ('038') claims the similar elements of presented application (i.e. "the source and destination color imaging systems to generate respective sets of device-independent color values" and "constructing color maps describing relationships between the different combinations of source and destination color imaging systems using the color conversions and user preferences"; See col 13 line 8-11, col 13 line 16-19 in '038'). The difference between the claims in the present application and the claims is the issued patent is that Applicant simply eliminates the some of steps/limitations [i.e. "storing a color map"] in the claims in the issued patent, thereby presenting broadly stated claims. However, the omission of these elements and their functions from the patent claims would have been obvious if the remaining elements (underlined limitations hereinabove) perform the same function as before, Note In re Karlson, 163 USPQ 184 (CCPA 1963). Also note Ex parte Rainu, 168 USPQ 375 (Bd. App. 1969)

Response to Arguments

Applicant's arguments received on 1-2-2003 have been carefully considered. However, they do not overcome the previous rejections, which have been maintained. Thus, the finality of this office action is deemed proper.

Regarding claims 25,28-29,31-33,35-38, 41 and 44, Applicant argued that the cited reference does not discloses that "generating a color map use of both converted

coordinates produced by interpretation of source and destination device profiles and user preferences" (See Remarks p.2 line 20-p.3 line 3) However, Swen et al clearly discloses that generating [by "colorsync utilities"; 34 in Fig 2] a color map ["CMMs"; 42,44,46 in Fig 2] based on converted coordinates ["various independent and derived color space"; col 8 line 3-12] produced by interpretation ["color space conversion"; 52 in Fig 3] of source and destination device profiles [36,38 in Fig 2] and user preferences ["a control panel interface by which users can set system profile"; col 2 line 20-31] Furthermore, in an analogous art, incorporating user's preferences into the system of color mapping/matching (as discussed in the teaching of Sakuyama et al) is well known in the ordinary skilled in the art to reflect user's desire in the processing of selecting or generating a color map. (See the rejections hereinabove) therefore, it would have been obvious to one skilled in the art to modify Swen et al's system to have user interface to select user's desired CMM in combination with source and destination profiles provided by system.

In response to Applicant's argument regarding double patenting rejection. (See Remark p.4-5) Examiner maintains the rejection based on 'case law' hereinbelow (Also See the rejection hereinabove). Claim 1 of U.S. Patent Number 6,088,038 encompass the limitations of claims 25,38,41 and 44 of the instant application. (A source/destination device profile interpreter that interprets a source/destination device profile to convert coordinates in a source/destination device color space to a device independent color space ["using forward transformation profiles that characterize the source and

destination color imaging systems to generate respective sets of device-independent color values for the source and destination color imaging systems"], A color transformer that generates a color map defining a relationship between the source and destination device color spaces based on the converted coordinates and user preferences specified by a user independently of the source and destination device profiles ["constructing color maps describing relationships between the different combinations of source and destination color imaging systems using the color conversions and user preferences"] Moreover, omission of a reference element whose function is not needed would be obvious to one of ordinary skill in the art. **It is well settled that the omission of an element (i.e. "storing a color map", "retrieving a stored color map upon user request") and its function is an obvious expedient if the remaining elements (underlined limitations hereinabove) perform the same function as before** In re Karlson, 163 USPQ 184 (CCPA 1963). Also note Ex parte Rainu, 168 USPQ 375 (Bd. App. 1969)

Conclusion

Applicant's response and amendment are not persuasive and the previous grounds of rejection have been maintained. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Chung whose telephone number is (703) 306-3419. He can normally be reached Monday-Thursday and alternate Fridays from 7:30am- 5:00pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael, Razavi, can be reached at (703) 305-4713.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

djc

JEFFERY BRIER
PRIMARY EXAMINER

March 21, 2003